



Airman with New Horizons mobile forward surgical team listens to heart and lungs of Belizean girl during medical readiness training exercise, May 1, 2014, in Santa Teresa, Belize (U.S. Air Force/Kali L. Gradishar)

Modernizing the Operational Design of the Medical Readiness Training Exercise

By Brian H. Neese and Douglas J. Robb

Each year, the U.S. military deploys hundreds of medics to see patients in direct patient care training exercises throughout the Americas, Asia, and other regions around the world. “More patients mean better training”

is the mantra of mission planners, commanders, and public affairs teams. Only cursory efforts are made during these missions toward building partnerships and host-nation institutional capacity. Geographic combatant command-

ers, however, expect to leverage these operational readiness training exercises, funded by humanitarian and civic assistance (HCA) dollars, to promote regional security and stability, while host nations want to improve their populations’ health, health systems, and institutional legitimacy. At great cost in money and opportunity, the legacy health fair-style medical readiness

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training exercise (MEDRETE) and its thousands of patients seen grossly underdeliver on all counts.

Joint military doctrine defines operational readiness skills in broad terms, allowing leaders to shape the training methodologies that will best advance the member's skill set. Thus, an array of activities can meet these goals, including new training platforms such as the embedded health engagement team (EHET), which sends clinicians to care for sick people in the context of the local health system.

U.S. and host-nation personnel collaborate to address clinical and health system issues, leading to growth in capacity and partnership for both sides. Nevertheless, year after year, leaders and planners turn to the pop-up health fair-style legacy MEDRETE as a singular approach to HCA-funded training missions regardless of strategic regional objectives. In so doing, the U.S. military allows an outdated, expensive tactical activity to drive its strategic planning.

Is it possible to build a MEDRETE designed for the modern era—one whose operational planning starts with the strategic endstate in mind, leverages the entire military health system across an array of potential global health engagement (GHE) activities, and fulfills the intent of current military doctrine and *U.S. Code* that govern HCA-funded missions? Indeed, such a model could build meaningful individual and institutional encounters that improve the breadth and depth of military training, increase a partner-nation's institutional capacities and legitimacy, and better the health outcomes of a population. Such interactions might also engender deep and lasting partnerships that advance the combatant commander's security cooperation objectives in a region. In a world of Great Power competition, where coalitions and partnerships are the linchpin to modern warfare, the U.S. military cannot afford to miss out on these competitive advantages.

The Planning Template

The U.S. military has a long history of leveraging health care to make security cooperation gains. During the Vietnam

War, U.S. military medics treated millions of Vietnamese civilians as part of the Medical Civic Action Program.¹ Later, this type of civilian-military interaction was linked to military training in the form of the MEDRETE. Today, U.S. Indo-Pacific Command routinely executes this direct patient care outreach mission in its Pacific Angel, Pacific Partnership, and other humanitarian exercises.

U.S. Southern Command started its annual humanitarian support mission in Latin America in the 1980s. Since that time, and with little variation year to year, it has employed a legacy MEDRETE model of primary care providers (family physicians, pediatricians, and the like), optometrists, dentists, and veterinarians delivering direct patient care. Ancillary support functions are included, such as pharmacy (pharmacist, pharmacy technician, and all medications) and medical logisticians with their accompanying medical supply and equipment. This is an expensive proposition; the typical HCA budget for a medical deployment-for-training mission is \$500,000.²

MEDRETEs have looked this way in part because of a myopic view of "training." What is it to train a joint medic? What does it mean to have advanced one's skills in operational readiness? What drives and scopes these training objectives?

The default methodology for training outpatient physicians has been to simply put a patient—even better, hundreds or thousands of patients—in front of them. MEDRETE-related public affairs communications, as well as situation reports sent up the chain of command, tout mission impact in terms of "4,500 patients seen" or the like. More patients seen, while delivering public diplomacy wins for stakeholders, implies better training for U.S. military medics.

This supposition is deeply flawed. Consider the typical primary care interaction in this setting where a brisk and superficial clinical encounter takes place. The patient, who is basically well, is being seen acutely for opportunistic reasons. Care is provided in a pop-up health system separated almost entirely from the

local health system. Chronic conditions are identified but cannot be treated, so the default exchange occurs where the provider dispenses over-the-counter pain and fever medications that are safe, innocuous, and largely ineffectual for the patient.

When the patient steps away, there will be dozens, even hundreds, more just like him or her over the course of the mission. Multiplying this minimally beneficial clinical encounter a thousand times over would still yield only minimal benefits. While there are some readiness training gains for Servicemembers, such as deployment preparation and learning to function in an austere environment, these are generic benefits that come with doing almost any expeditionary activity. The clinical and GHE training is minimal, to say the least, in making a verifiable impact on the patient's health or building the partner-nation's health capacity in support of theater security cooperation.

If this situation is going to be improved, we must look at the source of a military member's operational readiness training requirement. The Department of Defense Instruction governing the HCA mission states that the Universal Joint Task List (UJTL) is the official repository of tasks that "determine operational readiness training."³ The UJTL is a list of hundreds of tasks, but general themes do occur, such as conducting civil-military operations, promoting regional security, and coordinating security cooperation. Medical-specific areas are also listed, such as providing health services, conducting health engagements, and mitigating health threats. This is just a sampling, but it demonstrates that current military doctrine views operational readiness skills with a broader lens than historically assumed.

While it has proved difficult to properly align operational readiness training objectives to HCA-funded exercises, the security cooperation endeavor typically fares no better. Combatant commanders strive to "create strategic, operational, or tactical effects" in support of their security cooperation objectives, as well as to strengthen their partner nations institutionally, enabling these nations



"Dustoff" pilots and flight crew from 3rd Battalion, 25th Aviation Regiment, 25th Combat Aviation Brigade, train on air-to-ground patient transfers and reporting requirements during multiship joint training with Tripler Army Medical Center and 8th Forward Surgical Team, enhancing medical treatment skills on Oahu, Hawaii, August 8, 2020 (U.S. Army/Sarah D. Sangster)

to better stabilize regional threats.⁴ However, GHE efforts in the setting of a legacy MEDRETE are held in check by performance measures falsely perceived as training requirements—that is, seeing thousands of patients at a time. More concerted efforts to build partnerships or institutional capacities within the local health system are diminished. Formal or informal subject matter expert exchanges or bilateral educational seminars with host-nation counterparts are held on the side, if they are held at all, to prevent diverting attention and resources from high-patient volume legacy MEDRETEs.

Through this lens, the interactions between provider and patient appear limited to the extreme. Local patients and their community might take a positive view of the U.S. Government for the good that was done for them. However, the institutions that surround these patients—the

ministry of health, the hospitals, the clinics, and the pharmacies that support them all the other days of their life—are left no better off for the experience. Far from improving health care capacity, our presence may even diminish patients' views of their own health system and the government that provides it.

In this way, much as individual clinical interactions, the corporate interaction with the host nation is affected at the most superficial levels. Security cooperation efforts are pigeon-holed into generic "access and influence" effects, and only minimal gains are made along the combatant command's highest priority lines of effort. While it is Department of Defense policy to develop civilian partner-nation capacity and to use GHE to "improve the capabilities or capacities of the partner-nation's civilian health sector," little

ground is gained in this regard.⁵ The untapped potential of this mission to demonstrably improve health and the health system is unacceptably vast.

Modernizing the Operational Design

The new operational design starts by establishing strategic security cooperation objectives and desired host-nation priorities that will then drive operational efforts and tactical activities. Doctrinally, this is not new methodology, but it must be reiterated that activities will be shaped by the *desired strategic effects*. In the current state of affairs, the MEDRETE will be conducted regardless of any other strategic or operational goals. Thus, the tactical activity is the driver, not the desired strategic effect.

The next step is to develop UJTL-based competency objectives that provide

the standard against which training will be measured. At U.S. Southern Command, the command surgeon is required to “review data pertaining to engagement effectiveness . . . assess whether HN [host-nation] health care and U.S. medical training objectives were met, and potential opportunities to enhance U.S. training.”⁶ UJTL-based competencies can be used to create training objectives that serve as a target for both activity development and subsequent monitoring and evaluation.

Reviewing examples of well-integrated U.S. military disaster responses, such as the Chile earthquake of 2010, can help clarify what our medics need to gain from an HCA mission. In Angol, U.S. Air Force International Health Specialists worked with U.S. Agency for International Development response teams and the host nation to deploy an Air Force field hospital where a local 190-bed facility had been destroyed. For 10 days, 69 military medical personnel treated patients side by side with their Chilean counterparts. The U.S. Government then donated the facility, and the Chileans continued to operate out of it, even reinforcing parts of the structure to enable its continued use.⁷

This collaboration required military medics to leverage a plethora of UJTL-based competencies, such as coordinating health services, providing logistic sustainment, and synchronizing military efforts with other U.S. Government agencies. Furthermore, the bilateral exchange of information and shared experiences with our Chilean military counterparts strengthened the mutual trust required for successful coalition interaction. Since 2010, the Air Force (including the Texas Air National Guard) has partnered extensively with Chile to learn, train, and exercise aeromedical evacuation capabilities, including mass casualty response and critical care air transportation, in bilateral and multinational scenarios. The goals for this partnership are coalition interoperability that supports regional aerospace medicine and aeromedical evacuation capabilities in South America and beyond. This interoperability demonstrates the power of GHEs, whether in a

contingency or training environment, to advance a strategic alliance in support of theater security cooperation and regional stability.

The final step in this new planning methodology is determining a clearly defined health care problem that unifies all GHE activities. Strategic inputs might lead planners to health or disease burdens of national significance related to infectious disease, noncommunicable disease, or even maternal/child health. The World Health Organization’s Core Health Indicators further shape activity development by providing relevant quantifiable and measurable targets such as life expectancy, neonatal mortality, immunization rates, or tuberculosis treatment coverage.⁸ Aligning U.S. military activities against a single health care target with measurable health indicators allows effectiveness to be assessed, monitored, and evaluated. Future planning is then shaped annually to improve training opportunities and ensure sustainable impacts over time.

The complexity of these health-related problems is a strength of this planning methodology. Working along the entire continuum of care for a disease process or health burden could include preventive, diagnostic, and therapeutic components that engage clinical medicine, preventive medicine, public health, ancillary support, administration, and logistics. Each element provides a node of intervention. By applying all efforts against one clearly defined health care problem, synergies are created across the spectrum of medical activities. This could lead to tangible and measurable benefits to the host-nation’s health and health system, such as potential decreases in infant and maternal mortality rates, decreases in infectious disease burden and morbidity, or improved quality of life, to name only a few.

The Embedded Health Engagement Team

Let us imagine that planners are entering their strategic phase for an upcoming mission to Panama. Their first step would be to understand the desired endstate regarding theater security

cooperation, medical training, and host-nation health objectives. They would synthesize this strategic guidance in order to begin shaping a concept of operations that delivers optimal impact in all of those areas. In this process, they would determine a clearly defined health care problem to be addressed in the mission. All GHE activities would be designed to impact this one problem.

Planners might determine, for example, that the clearly defined health care problem in Panama is communicable infectious disease. This subject directly connects to the strategic security cooperation objective of mitigating natural disasters (think pandemic influenza, for instance) as well as force health protection concerns for our own deployed military personnel. The host nation might have also prioritized this problem because endemic infectious diseases (such as tuberculosis, leishmaniasis, and malaria) and emerging ones (such as zika and chikungunya) are a significant burden to the country’s population health and its health system.

With this in mind, planners could then refine the UJTL-based competencies to which they train their joint medics. Nesting under a global health and global health systems competency, as an example, one of a plethora of relevant force health protection training objectives might be to *understand vector-borne disease risk in the region*. Training our medics to recognize clinical symptoms of dengue fever or malaria, for example, would better prepare them to care for expeditionary military forces.

At this point, planners enter the operational phase. They must start asking themselves, “How do we build training activities that support these objectives?” Or, more germane to the discussion here, “Do we send our military medics down to Panama to execute a legacy MEDRETE health fair-style event in such a case?” The answer would likely be no.

Alternatives to the legacy model that better meet this training objective are a seminar-style information exchange or an embedded health engagement. Regardless of the chosen activity, the key



Soldiers present flyers promoting free medical event to local citizens of Chilanta, Guatemala, during Beyond the Horizon 2019 (U.S. Army Reserve/Olha Vandergriff)

point is that mission planners are fully unshackled from the one solution—that is, the health fair-style clinical outreach—and are able to look with an innovative and creative eye at the entire tool kit of activities that could meet this training objective.

Furthermore, we could bring into this fold all our medical assets for training and engagement. Because legacy MEDRETEs are limited in the career fields they pull from (typically around 20 different specialty codes), many disciplines and ultimately joint medics get left out. By opening our training aperture to a wider range of possibilities, the potential is now there to pull from every discipline and career field that makes up our military health system.

To see this in action, let us focus on the embedded health engagement team as a particular answer to the ills of the legacy MEDRETE, especially in regard to outpatient clinicians. The embedded health engagement team concept of operation calls for small, embedded multidisciplinary teams (12 or fewer joint force personnel) who bring the appropriate skill set for an intended task.⁹ The team would have comprehensive global health knowledge and foreign language capability (to include

the ability to work effectively through an interpreter), with some team members being novices and others advanced in these areas. The team would be prepared for the mission with country- and culture-specific training. The team would embed into the host-nation's health system for a minimum of 14 days.

Imagining again the hypothetical training objective above, *understand vector-borne disease risk in the region*, an embedded team could be deployed to address this focus area. The team might include primary care physicians, nurses, and medical technicians who work in a regional outpatient clinic or a national infectious disease referral clinic (or both) in order to understand clinical manifestations and disease management of common local infectious diseases. Inpatient physicians from internal medicine and its range of subspecialties (including infectious disease) could embed at national hospitals where the most severe sequela from infectious disease would present. Collegial exchanges of information in addition to the experience gained from direct patient care enhance learning and understanding for both U.S. and host-nation healthcare professionals. This EHET would go to

the sick people, as opposed to asking that healthy people come to them.

Simultaneously, EHET teammates might include a public health officer and technician who embed within the regional ministry of health to partner with colleagues conducting disease surveillance work in local communities. A laboratory officer and technician might embed at the regional and national referral labs in order to understand specimen processing and diagnostic communication challenges within the national and international health systems. There could even be a role for immunization technicians, microbiologists, scientific researchers, bioenvironmental engineers, pharmacists, and others to link up with their host-nation counterparts in their fields of interest.

Multiple teams over a span of months could execute this mission, building on lessons learned and shaping the activity as it presses forward. Imagining a process that goes from a mosquito bite in a rural area to a sick patient admitted to the inpatient unit at the national referral hospital, every node along that path is ripe to place an EHET. The pliability of this training platform is made possible by the leanness of the team (they bring few additional supplies or equipment) and the low costs involved (essentially just the member's travel and per diem).

The operational readiness skills training advantage compared with the legacy MEDRETE is immediately clear. Whereas the legacy MEDRETE naturally defaults to a superficial level of care along a narrow scope of practice largely dissociated from the host-nation health system, the EHET demands that its participants fully engage and interact with sick patients in the context of the host-nation's own resource-constrained health care system. EHET members must grow in their knowledge of culture, foreign language, geopolitical and socioeconomic forces, global health systems, health diplomacy, and security cooperation. Not coincidentally, these elements make up the operational readiness skills tasks that HCA-funded missions seek to achieve.

Furthermore, EHET members must work to provide quality care within the

limitations of the local system, while also collaborating to find ways to improve that system. Participants grow from these interactions, as do their host-nation colleagues and institutions. Thus, the effort in context affects the overall health care problem to be addressed in the exercise from both a patient and an institutional perspective.

Shifting primary care specialties such as family medicine, pediatrics, and women's health to work under the EHET model optimizes their impact. This also allows the legacy MEDRETE to focus on optometry, dental, and veterinary services, for which the health fair style fits naturally as both a training platform and an access-and-influence security cooperation tool. Future HCA-funded engagements that properly scope the legacy MEDRETE and effectively integrate the EHET would optimize joint medical training and fulfill the promise of security cooperation gains that combatant commanders expect from these missions.

Conclusion

To press forward with a new operational design for HCA-funded training exercises, a few points must be reiterated. First, training and security cooperation are not mutually exclusive endeavors. As has been shown, quite the opposite is true. The Department of Defense Instruction governing HCA states that HCA activities are to "create strategic, operational, or tactical effects that support combatant commander objectives in security cooperation" while simultaneously "reinforcing skills required for the operational readiness" of personnel.¹⁰ For too long now, the narrow focus on "numbers of patients seen" has driven a faulty notion of training and discarded a legitimate push toward security cooperation gains.

Second, HCA guidance as well as UJTTL-based competency objectives are sufficiently broad as to allow a wide array of tactical activities in support of operational and strategic theater security cooperation objectives. The historic lack of creativity in mission types is rooted in the stabilizing nature of the status quo, as well as a lack of understanding as to what

truly encompasses operational readiness skills. Alternatives to the legacy health fair-style event abound. These include embedded health engagement teams whose concept of operation is innovative and efficient and enables tremendous creativity in activity design. The advantages of this training platform synergize the positive effects of our security cooperation effort with improved results for each of the stakeholders involved.

Finally, generating change requires medical and line-side leadership to provide a forcing function to mission planners. Combatant commanders should insert language into mission planning orders, such as the exercise directive, stating their intent to leverage all assets and activities against one clearly defined health care problem. Furthermore, HCA managers and combatant command leaders, such as the command surgeon, could build UJTTL-based competencies into their accountability rubric to ensure training objectives are being met against a universal joint standard.

When we build lasting partnerships, improve a partner-nation's institutional capacities and legitimacy, and better the health outcomes of a population, we have most certainly advanced the combatant commander's security cooperation objectives in a region. Additionally, operational readiness skills training could take a giant leap forward by minimizing legacy MEDRETEs and maximizing the more pliable embedded health engagement team concept. This new, modernized approach to planning HCA-funded missions ensures that both training and security cooperation objectives are met through innovative, effective, and low-cost initiatives. In a future of increasingly contested environments where building allies and partnerships is fundamental to our strategic posture, the U.S. military simply cannot afford to miss out on these competitive advantages. JFQ

Notes

¹ Lieutenant Colonel Raymond A. Miller, USAF, 12th Air Force (AFSOUTH), Medical Planner, interview by authors, March 25, 2019.

² Ibid.

³ Department of Defense Instruction (DODI) 2205.02, *Humanitarian and Civic Assistance (HCA) Activities* (Washington, DC: Department of Defense, June 23, 2014, Incorporating Change 1, May 22, 2017), available at <www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/220502p.pdf>.

⁴ DODI 2000.30, *Global Health Engagement (GHE) Activities* (Washington, DC: Department of Defense, July 12, 2017), available at <https://fas.org/irp/doddir/dod/i2000_30.pdf>.

⁵ Ibid.

⁶ Regulation 35-2, *Joint/Combined Exercises and Component Training Deployments* (Doral, FL: U.S. Southern Command, 2016).

⁷ Matt Pueschel, "DOD Force Deployment: Adaptability on a Global Scale," *Combat & Casualty Care* (2nd Quarter 2011), 14–17, available at <<https://issuu.com/tacticaldefensemedia/docs/combatcasualtyq22011>>.

⁸ 2017–2027 *Theater Strategy* (Doral, FL: U.S. Southern Command, 2017), available at <https://libya360.files.wordpress.com/2018/08/ussouthcom_theater_strategy_final.pdf>.

⁹ Edwin K. Burkett, Brian H. Neese, and Cristina Y. Lawrence, "Developing the Prototype Embedded Health Engagement Team," *Military Medicine* 185, issue supplement 1 (January–February 2020), 549–553, available at <https://academic.oup.com/milmed/article/185/Supplement_1/549/5740812>.

¹⁰ DODI 2205.02.

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